

Express Mail Label No. ET648922654 US
Date of Deposit: February 27, 2002

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G01N 27/26, 27/12, 27/22, 31/06, G08B 17/10, G01R 27/26, H01C 7/10, H01R 9/09		A1	(11) International Publication Number: WO 00/33062 (43) International Publication Date: 8 June 2000 (08.06.00)
(21) International Application Number: PCT/US99/28282 (22) International Filing Date: 30 November 1999 (30.11.99) (30) Priority Data: 09/201,999 1 December 1998 (01.12.98) US (71) Applicant (for all designated States except US): CYRANO SCIENCES, INC. [US/US]; 73 North Vinado Avenue, Pasadena, CA 91107 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): SUNSHINE, Steven, A. [US/US]; 985 S. Oakland Avenue, Pasadena, CA 91106 (US). MUNOZ, Beth, C. [US/US]; 451 S. Oakland Avenue, Pasadena, CA 91107 (US). (74) Agents: SNYDER, Joseph R. et al.; Townsend and Townsend and Crew LLP, 8th Floor, Two Embarcadero Center, San Francisco, CA 94111 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: ALIGNED PARTICLE BASED SENSOR ELEMENTS			
(57) Abstract <p>The present invention relates to a sensor array for detecting an analyte in a fluid, comprising first and second sensors formed by chemically sensitive resistors, wherein the first sensor comprises a region of aligned conductive material; or where each of the sensors comprises alternating regions of nonconductive regions and aligned conductive regions with each resistor providing an electrical path through both the nonconductive region and the aligned conductive region, while each sensor manifests a different electrical resistance during contact with sample fluids having different analyte concentrations via the monitoring arrangement of having the sensors electrically connected to an electrical measuring apparatus. The aligned conductive particle material is aligned by exposure to either of an electric, magnetic, optical, photo-electric, electromagnetic or mechanical field, which serves to improve signal to noise ratio of vapor sensors allowing Lower Detection Limits for vapors being sensed. Such Lower Detection Limits allow for identification of lower concentrations of hazardous material and is advantageous in medical applications, such as detection of disease states in a patient.</p>			